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Wyong Shire Council

POLICY FOR DISCHARGE OF LIQUID TRADE WASTE TO THE SEWERAGE SYSTEM

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ABBREVIATIONS

ANZECC	Australian and New Zealand Environment and Conservation Council
ARMCANZ	Agriculture and Resource Management Council of Australia and New Zealand
BOD	Biochemical Oxygen Demand
COD	Chemical Oxygen Demand
DA	Development Application
EPA	Environmental Protection Authority
g/d	Grams per day
kL	Kilolitres
kl/a	Kilolitres per annum
kl/d	Kilolitres per day
kl/h	Kilolitres per hour
l/s	Litres per second
mg/L	Milligrams per litre
MBAS	Methylene Blue Active Substances
NATA	National Association of Testing Authorities
NOW	New South Wales, Office of Water

GLOSSARY

Act, Local Government Act: The *Local Government Act (NSW) 1993*

Assumed Concurrence: WSC has been granted authorisation by NOW to assume concurrence for Classification B and S activities.

Bilge Water: minor amounts of water collecting in the bilge of a vessel from spray, rain, seepage, spillage and boat movements. Bilge water may be contaminated with oil, grease, petroleum products and salt water.

Biochemical Oxygen Demand (BOD_5): The amount of oxygen utilised by micro-organisms in the process of decomposition of organic material in wastewater over a period of five days at 20°C. In practical terms, BOD is a measure of biodegradability of the waste.

Bio-solids: Primarily organic solid product produced by sewage processing. Until such solids are suitable for beneficial use, they are defined as wastewater solids or sewage sludge.

Bunding: Secondary containment which has been provided to storage areas, particularly for materials with the propensity to cause environmental damage.

Chemical Oxygen Demand (COD): A measure of oxygen required to oxidise organic and inorganic matter in wastewater by a strong chemical oxidant. Wastewaters containing high levels of readily oxidised compounds have a high COD.

Chemical Toilet: A toilet in which wastes are deposited into a holding tank containing a deodorizing or other chemicals; wastes are stored and must be pumped-out (and chemical recharged) periodically.

Commercial Kitchen/Caterer: A commercial kitchen is a premises that is typically a stand alone operation and prepares food for consumption off-site. These types of businesses typically cater to wedding functions, conferences and parties etc. This definition would not apply to a food processing factory supplying pre-prepared meals to an airline company or similar.

Contingency Plan: A set of procedures for responding to an incident that will affect the quality of liquid trade waste discharged to the sewerage system. The plan also encompasses procedures to protect the environment from accidental and unauthorised discharges to the stormwater drainage system from liquid trade waste discharges, and leaks and spillages from stored products and chemicals.

WSC: Wyong Shire Council.

Director General: Director-General means the Director-General of the Department of Environment, Climate Change and Water, (EPA).

Due Diligence Program: A plan that identifies potential health and safety, environmental or other hazards (eg spills, accidents or leaks) and appropriate corrective actions aimed at minimising or preventing the hazards.

Effluent: The liquid discharged following a wastewater treatment process.

Effluent Improvement Plan (EIP): The document required to be submitted by a discharger who is not meeting the acceptance limits for discharge waste quality set down in WSC's approval conditions and/or liquid trade waste agreement. The document sets out how a discharger will meet the acceptance limits for the discharge of liquid trade waste to the sewerage system within a given timeframe.

Galley Waste: is a liquid waste from a kitchen or food preparation area of a vessel; solid wastes are excluded.

Heavy Metals: Metals of high atomic weight which in high concentrations can exert a toxic effect and may accumulate in the environment and the food chain. Examples include mercury, chromium, cadmium, arsenic, nickel, lead and zinc.

Housekeeping: is a general term, which covers all waste minimisation activities connected with the way in which operations within the premises are carried out.

Industrial Discharges: Industrial liquid trade waste is defined as liquid waste generated by industrial or manufacturing processes.

Inspection: A visit to premises with the aim of monitoring and auditing the liquid trade waste pre-treatment system, to ensure the discharger is in compliance with the terms and conditions of an approval or liquid trade waste agreement.

Large Fast Food Outlet: A food business that typically discharges more than 5 kL/d. Premises of this nature include KFC, McDonalds, Red Rooster, Pizza Hut, Hungry Jack's and Burger King.

Local Government Regulation: *Local Government (General) Regulation 2005* under the *Local Government Act 1993*.

Liquid Trade Waste: Liquid Trade Waste means all liquid waste other than sewage of a domestic nature.

Mandatory Concurrence: For the liquid waste in Classification C, WSC will need to obtain concurrence from NOW for each discharger.

Methylene Blue Active Substances (MBAS): These are anionic surfactants (see Surfactants definition) and are called MBAS as their presence and concentration is detected by measuring the colour change in a standard solution of methylene blue dye.

Minimal Pre-treatment: Includes sink strainers, basket arrestors (for sink and floor wastes), plaster arrestors and fixed or removable screens.

National Framework for Wastewater Source Management: refer to section 3.2

National Framework for Regulation of Sewerage and Trade Waste: refer to section 3.1

NOW Concurrence: Is required before WSC may approve an application for the discharge of liquid trade waste (including septic tank and pan waste) to the sewerage system. It is a requirement under Section 90(1) of the *Local Government Act* and Clause 28 of the *Local Government (General) Regulation, 2005* that WSC obtain the written concurrence of the Director-General of the Department of Environment, Climate Change and Water (EPA) prior to the approval of such waste to be discharged to WSC's sewerage system.

Open Area: Any unroofed process, storage, washing or transport area potentially contaminated with rainwater and substances which may have an adverse affect on the sewerage system or the environment.

Pan: Any moveable receptacle kept in a closet and used for the reception of human waste.

pH: A measure of acidity or alkalinity of an aqueous solution, expressed as the logarithm of the reciprocal of the hydrogen ion (H^+) activity in moles per litre at a given temperature; pH 7 is neutral, below 7 is acidic and above 7 is alkaline.

Premises: Has the same meaning as defined in the *Local Government Act* Dictionary and includes any of the following:

(a) a building of any description or any part of it and the appurtenances to it;
(b) land, whether built on or not;
(c) a shed or other structure;
(d) a tent;
(e) a swimming pool;
(f) a ship or vessel of any description (including a houseboat); or
(g) a van.

Prescribed Pre-treatment Equipment: Standard non-complex equipment used for pre-treatment of liquid trade waste, for example a grease arrestor, an oil arrestor/separator, solids arrestor, cooling pit etc.

Primary Measurement Device: A device such as a gauging pit, weir tank or flume installed in the liquid trade waste discharge line suitable for installation of instrumentation for flow measurement. In cases of commercial flows this can mean a removable section of pipe (in the fresh water supply to the trade waste area) and the installation of a check meter.

Septage: Material pumped out from a septic tank during desludging; contains partly decomposed scum, sludge and liquid.

Septic Tank: Wastewater treatment device that provides a preliminary form of treatment for wastewater, comprising sedimentation of settleable solids, flotation of oils and fats, and anaerobic digestion of sludge.

Septic Tank Effluent: The liquid discharged from a septic tank after treatment.

Sewage Management Facility: A human waste storage facility or a waste treatment device intended to process sewage and includes a drain connected to such a facility or device.

Sewage of a Domestic Nature: Includes human faecal matter and urine and waste water associated with an ordinary kitchen, laundry and ablution activities of a household, but does not include waste in or from a sewage management facility.

Sewerage System: The network of sewage collection, transportation, treatment and by-products (effluent and bio-solids) management facilities.

Ship-to-Shore Pump-out: Liquid waste from a vessel that may be considered for disposal to the sewerage system. This includes on-board toilet wastes, galley wastes and dry dock cleaning waste from maintenance activities.

Sludge: The solids removed from wastewater by treatment.

Stormwater Run-off: Run-off resulting from rainfall.

Sullage: Domestic wastewater excluding toilet waste.

Surfactants: The key active ingredient of detergents, soaps, emulsifiers, wetting agents and penetrants. Anionic surfactants react with a chemical called methylene blue to form a blue-chloroform-soluble complex; the intensity of colour is proportional to concentration.

Surge Control Device: A device that is installed in a grease arrestor chamber and may improve the arrestor performance by stabilising hydraulic surges.

Suspended Solids (SS): The insoluble solid matter suspended in wastewater that can be separated by laboratory filtration and is retained on a filter. Previously also referred to as non-filterable residue (Non-filterable Residue (NFR)).

Total Dissolved Solids (TDS): The Total amount of dissolved material in the water.

Waste Minimisation: Procedures and processes implemented by industry and business to modify, change, alter or substitute work practices and products that will result in a reduction in the volume and/or strength of waste discharged to sewer.

Water Management Regulation: *Water Management (Water Supply Authorities) Regulation, 2004 under the Water Management Act, 2000.***A CURRENT COUNCIL APPROVAL IS REQUIRED FOR THE DISCHARGE OF ALL LIQUID TRADE WASTE INTO THE COUNCIL'S SEWERAGE SYSTEM**

PURPOSE OF THE POLICY

Sewerage systems are generally designed to cater for waste from domestic sources that are essentially of predictable strength and quality. As a service to businesses and industry, WSC may accept liquid trade waste into its sewerage system.

By comparison to domestic waste, liquid trade wastes may exert greater demands on sewerage systems and if uncontrolled, can pose serious problems to public health, worker safety, WSC's sewerage system and the environment.

Impacts of poor liquid trade waste management include:

- Grease, oil and solid material, if not removed on-site, can cause blockages in the sewerage system and result in overflows of untreated sewage to the environment.
- Strong non-domestic waste may cause odour problems and corrosion of sewer mains, pumping stations and sewage treatment facilities.

WSC's Liquid Trade Waste Policy deals with the approval process for the discharge of liquid trade wastes into WSC's sewerage system and the levying of appropriate fees and charges. It has been developed to ensure the proper control of liquid trade waste discharges to the sewerage system and hence protection of public health, worker safety, the environment and WSC's sewerage system. It also promotes waste minimisation and water conservation.

A person wishing to discharge liquid trade waste to the sewerage system must, under Section 68 of the *Local Government Act 1993*, obtain prior approval from WSC. Discharging liquid trade waste without an approval is an offence under Section 626 of the *Act*.

The procedure for approval is governed by Chapter 7 of the *Local Government Act* and is subject to the *Local Government (General) Regulation 2005*.

Under Section 90 of the *Local Government Act* and Clause 28 of the *Local Government (General) Regulation*, WSC may grant approval only if the Director-General of EPA has:

- concurred with the approval; or
- given WSC notice that concurrence may be assumed with such qualifications and conditions that may have been specified by notice.

DEFINITIONS

For the purpose of this policy,

Liquid Trade Waste *means all liquid waste other than sewage of a domestic nature.*

An incorrect, though commonly held view, is that only industrial premises produce liquid trade waste. In fact, liquid trade waste includes liquid waste discharged from:

- industrial premises;
- business/commercial premises (eg beautician, florist, hairdresser, hotel, motel, restaurant, butcher, service station, supermarket, dentist);
- community/public premises (including craft club, school, college, university, hospital and nursing home);
- trade activities (eg mobile carpet cleaner);
- any commercial activities carried out at a residential premises;
- saleyards, racecourses and from stables and kennels not associated with domestic households;
- septic tank waste, chemical toilet waste, waste from marine pump-out facilities and established sites for the discharge of pan content from mobile homes/caravans to the sewerage system; and

While septic tank, pan and ship-to-shore pump-out wastes are defined as trade waste, specific procedures need to be applied to their management as the waste is often transported from its source to the sewerage system. Accordingly, specific references to the wastes are provided in this policy, where necessary.

Liquid trade waste excludes:

- toilet, hand wash basin (used for personal hygiene only), shower and bath wastes derived from all the premises and activities mentioned above;
- wastewater from residential toilets, kitchens, bathrooms or laundries (i.e. domestic sewage);
- common use (non-residential) kitchen and laundry facilities in a caravan park; and
- backwash from residential swimming pools.

OBJECTIVES[1]

The objectives of this policy are:

- to protect public health;
- to protect the health and safety of WSC employees;
- to protect the environment from the discharge of waste that may have a detrimental effect;
- to protect WSC assets from damage;
- to assist WSC to meet its statutory obligations;
- to provide an environmentally responsible liquid trade waste management service to the non-residential sector;
- to encourage waste minimisation and cleaner production in the commercial and industrial sectors;
- to promote water conservation, water recycling and bio-solids reuse;
- to ensure compliance of liquid trade waste dischargers with WSC's approval conditions;
- to provide operational data on the volume and composition of industrial and commercial effluent to assist in the operation of the sewerage system and the design of augmentations or new sewerage systems; and
- to ensure commercial provision of services and cost recovery through appropriate sewerage and liquid trade waste fees and charges.

SCOPE OF THE POLICY

This policy comprises four parts:

- Part 1 specifies the circumstances in which an exemption may be granted from the necessity to obtain an approval to discharge liquid trade waste to the sewerage system;
- Part 2 specifies the criteria which WSC will take into consideration in determining whether to approve or refuse a liquid trade waste application;
- Part 3 specifies the framework for regulation of Liquid Trade Waste, including the NSW Framework for Regulation of Sewerage and Trade waste, alignment with the *National Framework for Wastewater Source Management*, application procedures, liquid trade waste discharge categories, liquid trade waste service agreements, monitoring of liquid trade waste discharges, liquid trade waste fees and charges, modification or revocation of approvals, prevention of waste of water and contaminated stormwater discharges from open areas.
- Part 4 specifies the criteria regarding the management of Septic Tanks and private pumping stations. This section does not relate to parts 1-3, due to the waste discharged from these sites not being classified as Liquid Trade Waste. WSC has included the regulation of septic tanks and private pumping stations in this policy for regulation purposes. The management of septic tanks and private pumping stations is legislated under section 68, Part C6, of the Local Government Act, 1993.

[1] The above objectives are consistent with the *National Framework for Wastewater Source Management* on page 22 of *the National Source Management Guideline, July 2008*, Water Services Association of Australia (WSAA).

PART 1 – EXEMPTIONS *

Table 1: Exemptions

This table lists commercial business activities that the Director-General, NOW has consented to an exemption from the requirement to apply for approval for liquid trade waste discharge to the sewerage system. Each such business must meet the standard requirements specified below. Annual trade waste fees do not apply to the following dischargers.

Activity	Requirements
Beautician	Nil
Bed and Breakfast (not more than 10 persons including proprietor)	Sink strainers in food preparation areas. Housekeeping practices (see Note 4)
Community hall (minimal hot food, no grease arrestor)	Sink strainers in food preparation areas. Housekeeping practices (see Note 4)
Childcare / Day care centre (minimal hot food prepared) Classification assessed individually based on deemed risk level, type of food prepared & number of hot meals prepared. Existing properties with grease arrestors are not eligible for exemption but may be assessed and reclassified by Council to a lower risk category.	Sink strainers in food preparation areas. Housekeeping practices (see Note 4). Nappies are not to be flushed into the toilet.
Delicatessen (no hot food prepared)	Sink strainers in food preparation areas. Housekeeping practices (see Note 4)
Dental technician (moulding, impressions, X-ray)	Plaster arrestor required. X-Ray waste, if generated, must be captured and contained and not discharged to sewer, alternately digital X-ray equipment can be used.
Doctor's surgery – Medical Centre (plaster casts, X-ray)	Plaster arrestor required. X-Ray waste, if generated, must be captured and contained and not discharged to sewer, alternately digital X-ray equipment can be used.
Dog/cat groomer/salon Vet Surgery	Floor waste basket and sink strainer required (see Note 3). Animal litter and any waste disposal products may not be discharged to sewer. No organophosphorus pesticides to be discharged to sewer. X-Ray waste, if generated, must be captured and contained and not discharged to sewer, alternately digital X-ray equipment can be used.
Florist	Floor waste basket and sink strainer required.

	No herbicides/pesticides may be discharged to sewer.
Fruit and vegetable – retail	Floor waste basket and sink strainer (see Note 3)
Funeral parlour	Floor waste basket required. Formaldehyde is not to be discharged to the sewer.
Hairdressing	Floor waste basket and sink strainer (where available)
Jewellery shop - *Miniplater* *Ultrasonic washing* *Precious stone cutting*	Miniplater vessel to contain no more than 1.5L of precious metal solution Nil If: <1000 L/d plaster arrestor required >1000 L/d general purpose pit required
Mixed business (minimal hot food) (Exemption subject to Council assessment)	Floor waste basket and sink strainer required (see Note 3) Housekeeping practices (see Note 4)
Mobile cleaning units *Carpet cleaning* *Garbage bin washing* Venetian blind cleaning	 20 micro filtration system fitted to a mobile unit. Floor waste basket required, Discharge is via grease arrestor (if available) Venetian blind cleaning
Motel (minimal hot food prepared and no laundry facility)	Floor waste basket and sink strainer required (see Note 3)
Nut shop	Floor waste basket and sink strainer required (see Note 3)
Optical service – retail	Solids settlement tank / pit required
Pet shop – retail	Floor waste basket and sink strainer required (see Note 2)
Sandwich shop, salad bar, juice bar, coffee shop (minimal hot food prepared, Exemption subject to Council assessment)	Floor waste basket and sink strainer required (see Note 3) Housekeeping practices (see Note 4)

Notes:

1 Where "required" is used it means as required by Council.

2 If activity is conducted outdoors, the work area is to be roofed and bunded to prevent stormwater ingress into the sewerage system.

3 All drainage from floors in food preparation areas is required to pass through a floor waste basket.

4 Food preparation activities need to comply with sound housekeeping practices including:

(a) Floor must be dry swept before washing

(b) Pre-wiping of all utensils, plates, bowls etc to the scrap bin before washing up.

(c) Use of a food waste disposal unit is not permitted.

PART 2 – CRITERIA FOR APPROVAL TO DISCHARGE LIQUID TRADE WASTE INTO WSC'S SEWERAGE SYSTEM

2.1 FACTORS FOR CONSIDERATION

WSC's decision to accept liquid trade waste into the sewerage system is on the basis of a preventative risk management framework for managing risks to the sewerage system within an integrated water cycle management* context. It will be based on the discharge meeting WSC's requirements#. When determining an application to discharge liquid trade waste into the sewerage system, WSC will consider the following factors:

- The potential for the liquid trade waste discharge to impact on public health.
- The possible impacts the discharge may pose to the environment (land, water, air, noise, or nuisance factors).
- The potential impacts of the discharge on the health and safety of WSC's employees.
- The possible impact of the discharge on WSC's sewerage infrastructure or sewage treatment processes.
- The capability of the sewerage system (both transportation and treatment components) to accept the quality and quantity of the proposed liquid trade waste discharge.
- The impact the liquid trade waste will have on the ability of the sewerage scheme to meet Department of Environment and Climate Change (DECC) licence requirements.
- Compliance of the proposed liquid trade waste discharge with guideline limits in this policy**.

* Integrated Water Cycle Management Guidelines for NSW Local Water Utilities, NOW, October 2004.

In considering options for waste management to drive resource efficiency, the following order of preference set out on page 6 of the National Wastewater Source Management Guidelines, July 2008, WSAA will be adopted;

- Avoidance
- Minimisation
- Re-use
- Recovery of energy
- Treatment
- Disposal

**** Note:** The quality of the liquid trade waste from some low risk commercial activities in Classification A will exceed guideline limits in this Policy. As a higher level of pre-treatment is not cost effective, such waste is acceptable if the discharger installs and properly operates and maintains the required pre-treatment equipment. Similarly, septic tank and pan waste may exceed some guideline limits.

- The potential impacts of the discharge on the quality of, and management practices for, effluent and bio-solids produced from the sewage treatment process.
- The adequacy of the pre-treatment process(es) to treat the liquid trade waste to a level acceptable for discharge to the sewerage system, including proposed safeguards if the pre-treatment system fails.

- Whether appropriate safeguards are proposed to avoid the discharge of other, non-approved wastes to the sewerage system.
- The adequacy of any chemical storage and handling facilities, and the proposed safeguards for preventing the discharge of chemicals to the sewerage system.
- Whether prohibited substances are proposed to be discharged.
- The potential for stormwater entering the sewerage system and adequacy of proposed stormwater controls.
- Waste minimisation and water conservation programs.
- The adequacy of the proposed due diligence program and contingency plan, where required.

2.2 DISCHARGE QUALITY

WSC has guideline limits for the acceptance of discharges as set out in Table 1.

Dischargers are required to install pre-treatment equipment as necessary to achieve these standards.

Where the guideline limits cannot be met, applicants are required to provide justification for exceeding the limits. Based on the type and proposed levels of contaminants, WSC may refuse the application, or may approve it subject to an effluent improvement program, or other conditions being implemented.

2.3 PROHIBITED SUBSTANCES

Table 2, sets out those substances which must not be discharged to the sewerage system unless the discharge is specifically approved by WSC under Section 68 of the *Local Government Act, 1993*.

2.4 STORMWATER DISCHARGES FROM OPEN AREAS

Stormwater is a prohibited discharge under this Policy (Table 2). The ingress of stormwater into the sewerage system can cause system operational problems resulting in sewer overflows due to overloading of the system.

However, it is recognised it may not always be possible or practical to prevent all stormwater entering into the sewerage system at some liquid trade waste generating premises. The discharge of limited quantities of first flush water from sealed areas will be considered where roofing cannot be provided because of safety or other important considerations. The discharge from unsealed areas is not permitted.

Before the stormwater will be considered for discharge to the sewerage system, the applicant must provide the following information:

- reasons why the area cannot be fully or partially roofed and bunded to exclude stormwater;
- the dimensions and a plan of the open area under consideration;
- whether the open area is sealed;
- the estimated volume of the stormwater discharge;

- information on rain gauging;
- where a first-flush system is proposed, details on how the stormwater will be diverted to the drainage system after the first flush is accepted (the first- flush to be limited to first 10 mm of storm run-off);
- measures proposed for diverting stormwater away from the liquid trade waste generating area; and
- a report on other stormwater management options considered and why they are not feasible.

2.5 FOOD WASTE DISPOSAL UNITS

The use of food waste disposal units (also known as in-sinkerators, in-sink food waste disposers, or garbage grinders) is not permitted.

Existing installations in hospitals and nursing homes may be permitted, provided that the wastewater is discharged through an adequately sized grease arrestor.

If a hospital or nursing home kitchen is refurbished, the food waste disposal unit must be removed.

2.6 DEVICES THAT MACERATE OR PULVERISE WASTE

WSC will not accept any discharges from macerators, or any other similar devices, used for pulverising solid waste as they are not authorised to connect to WSC's sewerage system. (Refer: *NSW Code of Practice: Plumbing and Drainage, 2006*). Solid waste includes, but is not limited to, sanitary napkin, placenta, surgical waste, disposable nappy, and mache bedpan and urine containers.

2.7 USE OF ADDITIVES IN PRE-TREATMENT SYSTEMS

WSC does not allow solvents, enzymes, bio-additives, and odour control agents to be used in pre-treatment systems (except neutralising chemicals designated for the pre-treatment) except by specific written application and subsequent approval.

TABLE 1 – LIMITS FOR ACCEPTANCE OF LIQUID TRADE WASTES INTO SEWERAGE SYSTEMS

GENERAL ACCEPTANCE LIMITS

Parameter	Limits
Flow rate	The maximum daily and instantaneous rate of discharge (kL/h or L/s) is set on the available capacity of the sewer. Large dischargers are required to provide a balancing tank to even out the load on the sewage treatment works.
BOD_5 and suspended solids	Normally, approved at 300 mg/L each. Concentration up to 600 mg/L and in some cases higher concentration for low mass loadings may be acceptable if the treatment works has sufficient capacity and odour will not be a problem.
COD	Normally, not to exceed BOD_5 by more than three times. This ratio is given as a guide only to prevent the discharge of non-biodegradable waste.
Total dissolved solids	Up to 4000 mg/L may be accepted. However, the acceptance limit may be reduced depending on available effluent disposal options and will be subject to a mass load limit.
Temperature	Less than 38°C.
Ph	Within the range 7.0 to 9.0.
Oil and Grease	100 mg/L if the volume of the discharge does not exceed 10% of the design capacity of the treatment works, and 50 mg/L if the volume is greater than 10%.
Detergents	All industrial detergents are to be biodegradable. A limit on the concentration of 50 mg/L (as MBAS) may be imposed on large liquid trade wastes.
Colour	No visible colour when the waste is diluted to the equivalent dilution afforded by domestic sewage flow.
Radioactive substances	The discharge must comply with the *Radiation Control Act 1990*.

TABLE 1 (cont) – LIMITS FOR ACCEPTANCE OF LIQUID TRADE WASTES INTO SEWERAGE SYSTEMS

ACCEPTANCE LIMITS FOR INORGANIC COMPOUNDS

Parameter	Maximum concentration (mg/L)
Ammonia (as N)	50
Boron	5
Bromine	5
Chlorine	10
Cyanide	1
Fluoride	20
Nitrogen (total Kjeldahl)	100
Phosphorus (total)	20
Sulphate (as SO_4)	500
Sulphide (as S)	1
Sulphite (as SO_3)	15

ACCEPTANCE LIMITS FOR ORGANIC COMPOUNDS

Parameter	Maximum concentration (mg/L)
Benzene	0.04
Toluene	0.5
Ethylbenzene	1
Xylene	1
Formaldehyde	30
Phenolic compounds (except pentachlorophenol)	5
Petroleum hydrocarbons (non-flammable)*	30
Pesticides general(except organochlorine and organophosphorus)*	0.1
Polynuclear Aromatic Hydrocarbons (PAHs)	5

TABLE 1 (cont.) – LIMITS FOR ACCEPTANCE OF LIQUID TRADE WASTES INTO SEWERAGE SYSTEMS

ACCEPTANCE LIMITS FOR METALS

Parameter	Maximum Concentration (mg/L)	Allowed daily mass limit (g/d)
Aluminium	100	-
Arsenic	1	2
Cadmium	1	6
Chromium*	3	15
Cobalt	5	15
Copper	5	15
Iron	100	-
Lead	1	6
Manganese	10	30
Mercury	0.01	0.05
Molybdenum	5	30
Nickel	3	15
Selenium	1	15
Silver#	2	6
Tin	5	15
Zinc	5	15
Total metals excluding aluminium, iron, manganese and molybdenum	less than 30 mg/L and subject to total mass loading requirements	

* *Where hexavalent chromium (Cr^{6+}) is present in the process water,* ***pre-treatment*** *will be required to reduce it to the trivalent state (Cr^{3+}), prior to discharge into the sewer. Discharge of hexavalent chromium (Cr^{6+}) from chromate compounds used as corrosion inhibitors in cooling towers is* ***not permitted.***

\# *This limit is applicable to large dischargers. The concentration of silver in photo processing waste where a balancing tank is provided is not to exceed 5 mg/L.*

TABLE 2 – SUBSTANCES PROHIBITED FROM BEING DISCHARGED INTO THE SEWERAGE SYSTEM

The following substances are prohibited from being discharged into the sewerage system:

- Organochlorine weedicides, fungicides, pesticides, herbicides and substances of a similar nature and/or wastes arising from the preparation of these substances
- Organophosphorus pesticides and/or waste arising from the preparation of these substances
- Any substances liable to produce noxious or poisonous vapours in the sewerage system
- Organic solvents and mineral oil
- Any flammable or explosive substance
- Discharges from "Bulk Fuel Depots"
- Chromate from cooling towers
- Natural or synthetic resins, plastic monomers, synthetic adhesives, rubber and plastic emulsions
- rain, surface, seepage or subsoil water (unless specifically permitted)
- Solid matter
- Any substance assessed as not suitable to be discharged into the sewerage system
- Waste that contains pollutants at concentrations, which inhibit the sewage treatment process – refer *National Wastewater Source Management Guideline, July 2008, WSAA; and*
- Any other substance listed in a relevant regulation

PART 3 – FRAMEWORK FOR THE REGULATION OF LIQUID TRADE WASTE

3.1 The NSW Framework for Regulation of Sewerage and Trade Waste

Due to the 'Tragedy of the Commons* in the use of common pool resources, sound regulation of sewerage and trade waste requires implementation of all of the following integrated measures.

(1) Preparation and implementation of a sound trade waste regulation policy, assessment of each trade waste application and determination of appropriate conditions of approval. The conditions must be consistent with the LWU's *Integrated Water Cycle Management Strategy* and demand management plan. In addition, execution of a liquid trade waste services agreement is required for large dischargers to ensure compliance.

(2) Preparation and implementation of a sound Development Servicing Plan**, with commercial developer charges to ensure new development pays a fair share of the required infrastructure.

(3) Full cost recovery with appropriate sewerage usage charges*** and trade waste fees and charges, in order to provide the necessary pricing signals to dischargers. These charges must include non-compliance trade waste usage charges and non-compliance excess mass charges in order to provide necessary incentives for dischargers to consistently comply with their conditions of approval.

* Refer to page 3 of the National Wastewater Source Management Guideline, July 2008, WSAA. Thus, in absence of appropriate controls and measures (such as conditions of approval, a sewerage usage charge, a trade waste usage charge, a non-compliant trade waste usage charge, excess mass charges, non-compliant excess mass charges and penalty notices), it would be in the economic interest of each trade waste discharger to minimise

their efforts and expenditure on control and pre-treatment of their trade waste before discharging it into the sewerage system. In the past, failure to implement these measures has caused multi-million dollar damage to sewerage networks, pumping stations and treatment plants.

** In accordance with the *NSW Developer Charges Guidelines for Water Supply, Sewerage and Stormwater, 2002*.

*** In accordance with page 29 of *the NSW Water Supply, Sewerage and Trade Waste Pricing Guidelines, 2002*.

(4) Monitoring, mentoring and coaching of dischargers in order to achieve cleaner production and assist them to comply with their conditions of approval.

(5) Enforcement, including appropriate use of penalty notices under section 222 of the Protection of the Environment Operations Act, 1997. Orders may also be issued and penalties imposed for offences under sections 626, 627 and 628 of the Local Government Act, 1993.

(6) Disconnection of a trade waste service in the event of a persistent failure to comply with WSC's conditions of approval.

Together, the above 6 measures comprise the NSW framework for regulation of sewerage and trade waste. The framework involves a preventative risk approach, which has been developed to address the use of common pool resources by providing economic incentives for dischargers to minimise their waste and to consistently comply with their conditions of approval.

3.2 ALIGNMENT WITH THE NATIONAL FRAMEWORK FOR WASTEWATER SOURCE MANAGEMENT

The NSW framework for regulation of sewerage and trade waste is outlined in section 3.1 above. The NSW framework is driven by the NSW Government's *Best-Practice Management of Water Supply and Sewerage Guidelines, 2007* and is consistent with that in the *National Framework for Wastewater Source Management*.

3.3 APPLICATION PROCEDURES

To obtain approval to discharge liquid trade waste to WSC's sewerage system, a discharger must lodge a written application on the form provided. Application forms are available from WSC. The information required will be detailed on the application form.

If a person wishes to discharge liquid trade waste to the sewerage system but is not the owner of the premises, the person must obtain the owner's consent to the application, either by the property owner signing the application or the property owner providing a letter authorising the applicant to sign on their behalf.

Applicants are encouraged to contact a WSC Trade Waste Officer to discuss requirements prior to submitting an application. The Trade Waste Officer will assist in identifying the potential need for an application in association with any Development Application (DA).

An applicant may make a minor amendment or withdraw an application before it is approved by WSC. An applicant may also apply to WSC to renew or extend an approval, in accordance with Section 107 of the Local Government Act.

An approval to discharge liquid trade waste to WSC's sewerage system is not transferable. A new application must be lodged and a new approval obtained if there is a change of the approval holder or

the activity. WSC must be notified of change of ownership and/or occupier in all cases, whether a new approval is required or not, to allow updating of records.

The procedure for assessing an application is as follows:

- Applicant completes an application and submits it to WSC. Application forms are available from WSC.
- The Application is assessed by WSC and subject to it meeting Policy requirements, WSC issues an approval or refusal letter. This letter advises the discharger of the approval conditions of discharge or the reasons for refusal.
- In cases where WSC requires a discharger to enter into a services agreement, WSC will issue a deferred commencement approval, under Section 95 of the Local Government Act, requesting the discharger to do so within the time specified in WSC's letter. In such cases, the approval will not be operative until the agreement has been executed by the discharger.

Note: If WSC supports an application and has been advised that concurrence of the Director-General, EPA, can be assumed without further reference to EPA, WSC will approve the application.

Otherwise, WSC will seek concurrence from NOW in accordance with the requirements of section 90(1) of the Local Government Act. All Classification C liquid trade waste applications must be forwarded by WSC to NOW for concurrence.

3.4 APPROVAL OF APPLICATIONS

Under Section 86 of the *Local Government Act*, WSC may require an applicant to provide more information than required by the application form to enable it to make a decision on the application.

After considering the application, WSC will issue an approval letter to the applicant. The approval will set out the circumstances and conditions of approval. Such conditions may include, but not be limited to:

- A requirement to measure volume of discharge
- A specific limit on the daily discharge and rate of discharge
- Specifications as to the characteristics of the waste permitted to be discharged
- Constraints on the size and capacity of the drain conveying the waste to the sewerage system
- Specific times during which discharge is permitted
- Required modifications to proposed or existing pre-treatment methods and works

Should WSC refuse an application**,** WSC will notify the applicant of the grounds for refusal. The applicant may seek a review of the determination by applying to WSC in writing.

The normal terms of approval will be as follows:

The term of approval, for all Classifications of liquid trade waste discharger, will lapse when:

- The ownership of the property changes

- The business ceases trading
- The nature of the business changes

Note: It is the property owner's responsibility to notify WSC if the business ceases trading.

3.4.1 RENEWAL OF APPROVALS

An approval to discharge liquid trade waste to WSC's sewer is not transferable. A new application must be lodged and a new approval obtained if there is a change of property owner or the activity.

WSC must be notified of change of ownership and/or occupier in all cases, whether a new approval is required or not, to allow updating of records.

3.4.2 MODIFICATION AND REVOCATION OF APPROVALS

WSC reserves the right to modify or revoke an approval to discharge liquid trade waste to the sewerage system in any of the following circumstances:

- if the approval was obtained by fraud, misrepresentation or concealment of facts
- for any cause arising after the granting of the approval which, had it arisen before the approval was granted, would have caused the WSC not to have granted the approval
- failure to comply with a requirement made by or under the *Local Government Act,* 1993 relating to a condition of the approval
- failure to comply with a condition of the approval

If the trader/licensee, or the trading name changes, a new 'Change of Trader" liquid trade waste application is required.

3.5 LIQUID TRADE WASTE CLASSIFICATIONS

Liquid trade waste discharges are divided into four risk or volume related classifications - A, B, C and S. WSC's approval process varies depending on the type of classification. Details of the four classifications are as follows:

Classification A

This involves low risk liquid trade waste discharges where:

- the discharge is of a low volume and/or low strength
- no pre-treatment is required, or there are prescribed standard non-complex pre-treatment devices available to treat the waste to a satisfactory level
- the waste poses a low risk to the sewerage system, the environment and public or worker health and safety
- standard conditions may be used for the approval
- the trade waste volume is less than 5 kL/d or 1000 kL/a, except in the case of commercial retail food preparation activities, where up to 16 kL/d is allowed

- Where more than four Classification A discharges are being generated from a single premises or a complex (eg. shopping arcade, educational facility, hospital), the discharge must be treated as Classification B

Classification B

This involves medium risk liquid trade waste discharges, defined as:

- a range of commercial retail activities
- community/public premises
- education facilities
- hospitals
- a Classification A activity which exceeds permissible flow limits
- any Classification A activity comprising more than four Classification A discharges from a single premises or a complex

provided that:

- the discharge volume does not exceed 20 kL/d
- the acceptance limits in Table 1 are met
- excluded substances as detailed in Table 2 are not present in the waste

Classification C

This involves high risk and large liquid trade waste discharges which:

- are not nominated as a Classification A or Classification B activity, and/or
- involve a discharge volume in excess of 20 kL/d.

Classification S

This involves septic tank waste, pan waste and ship-to-shore pump-outs into the sewerage system.

3.6 LIQUID TRADE WASTE CHARGING CATEGORIES

3.6.1 GENERAL

Figure 1 is a flow chart indicating the relationship between the classifications and charging categories. Clauses 3.4.2 to 3.4.5 inclusive, provide further detail to the charging categories.

In addition to the above risk related classifications A, B, C and S, all liquid trade waste dischargers are allocated to one of four charging categories: Category 1, 2, 3 or S - for trade waste charging purposes. Categorisation is based on the nature, volume and degree of pre-treatment required of discharges.

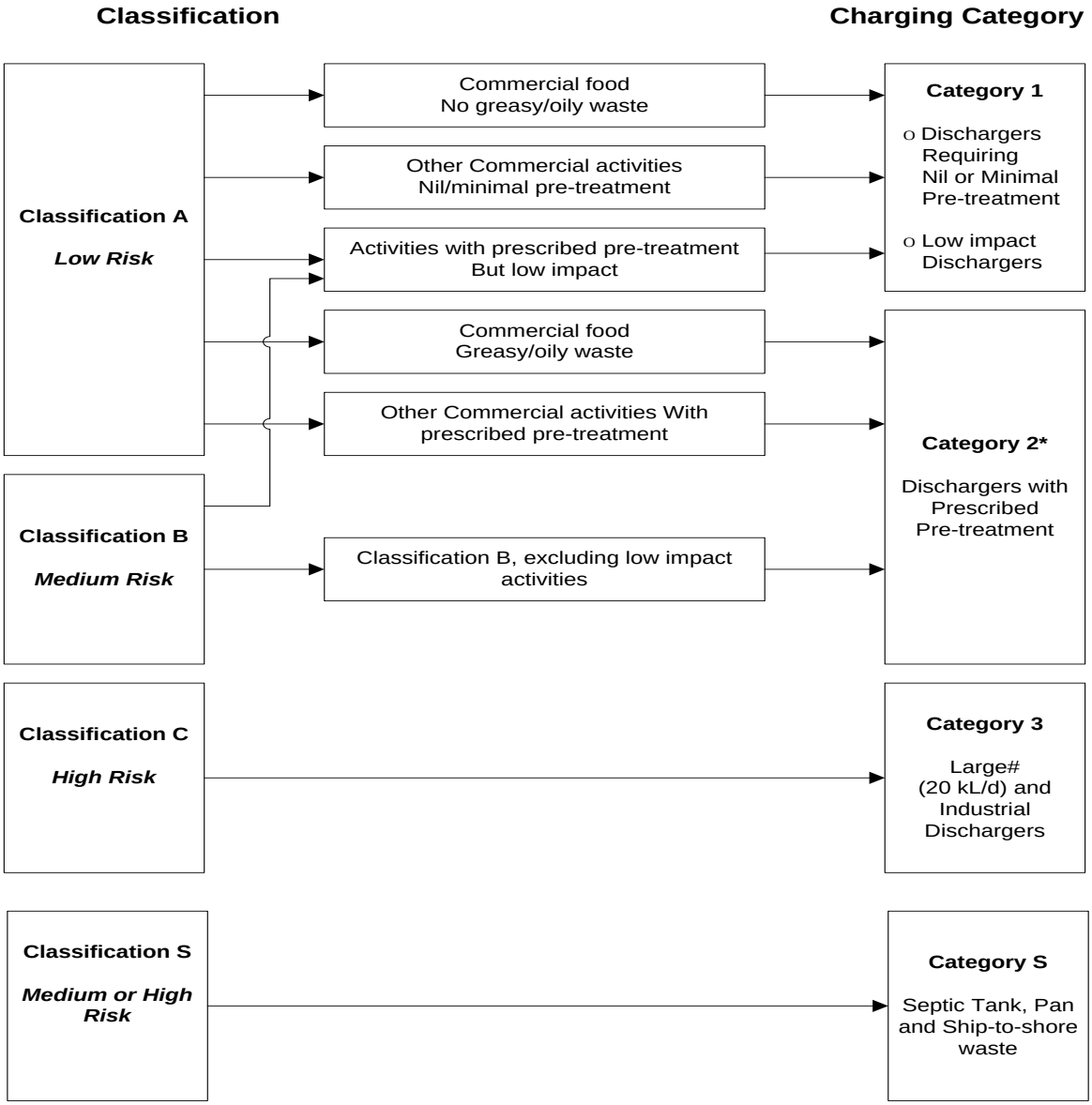

Figure 1 – Charging Categories for Trade Waste

* Also includes fish shop (fresh fish for retail).

Except shopping complexes and institutions (hospitals, educational facilities, etc).

3.6.2 CATEGORY 1 DISCHARGER (nil or minimal pre-treatment)

Category 1 liquid trade waste dischargers are those conducting an activity that:

- require nil or only minimal pre-treatment equipment
- discharge an effluent that is well defined and of a relatively low risk to the sewerage system, and

Included are Classifications A or B activities with prescribed pre-treatment but low impact on the sewerage system.

Classification A Activities – Commercial retail (food preparation activities that do not generate an oily/greasy waste): bakery (only bread baked on-site), bistro (sandwiches, coffee only), café/coffee shop/coffee lounge, canteen, community hall (minimal food), day care centre, delicatessen, fruit & vegetable shop, hotel, ice cream parlour (take away only), juice bar, mixed business, motel, nightclub, nut shop, pizza cooking/reheating (no preparation or washing up on-site), pizza heated and sold for consumption off-site, potato peeling (small operation), sandwich shop/salad bar.

Classification A – Other Activities: animal wash, beautician/hairdressing, crafts <1000 L/d, dental surgery (plaster casts, no X-ray unless digital), doctor's surgery and medical centre (plaster casts, no X-ray), florist, funeral parlour, mobile carpet cleaning units, morgue, jewellery shop, optical services (retail), pet shop, plants retail (no nursery), public swimming pool, photographic (tray work/manual development), venetian blind cleaning, veterinary (no X-ray).

Classification A or B Activities – dischargers with prescribed pre-treatment with low impact on the sewerage system: boiler blowdown, cooling tower, industrial boilers, laboratory (analytical/pathology/tertiary institution), laundry, primary and secondary school (if significant hot food preparation is carried-out, Category 2 charges may be levied by WSC), vehicle washing.

NOTE: Some of the above Category 1 business activities may be subject to approval exemption. Exempt business activities can be found in Part 1 of this policy.

3.6.3 CATEGORY 2 DISCHARGER (prescribed pre-treatment)

Category 2 liquid trade waste dischargers are those conducting an activity that;

- require a prescribed type of liquid trade waste pre-treatment equipment (see following (but not limited to) pre-treatment equipment List)
- discharge an effluent that is well characterised, and

Trade Waste dischargers with prescribed pre-treatment (excludes low impact activities, listed under Category 1) include:

Classification A Activities: Premises that **prepare and/or serve hot food, or foods that generate oily/greasy waste**: bakery (pies, sausage rolls, quiches, cakes, pastries with cream or custards), bistro, boarding house/hostel, butcher, café/coffee shop coffee/lounge, cafeteria, canteen, fast food outlet, chicken/poultry shop, club, community hall if the type and size of kitchen fixtures installed enable catering for large functions), commercial kitchen/caterer, nursing home, patisserie, supermarket, donut shop, fish shop (cooking on-site), function centre, hotel, ice cream parlour, motel, nightclub, pizza cooking, restaurant, sandwich shop/salad bar, takeaway food outlet.

Other commercial Classification A activities: car detailing, craft activities > 1000 L/d, dental surgery with X-ray, lawnmower repairs, mechanical workshop, stone working, veterinary surgery (with X-ray), waterless minilab.

Classification B activities: auto dismantler, bus/coach depot, construction equipment maintenance & cleaning, equipment hire/maintenance & cleaning, glass cutting & grinding, graphic arts, hospital with or without X-ray), medical centre (with X-ray), optical services (at medical or educational facilities, workshops), oyster processing (shucking), panel beating, photographic laboratory, radiator repairer, screen printing, service station forecourt, shopping complex, water wash mini-lab, X-ray radiologist.

Other Classification A activities: fish shop (fresh fish for retail).

Types of Prescribed Standard Non-complex Pre-treatment Equipment

- Grease arrestor
- Basket arrestor with fixed screens
- Sink screens
- Fixed or removable mesh screen
- Corrugated plate interceptor
- Vertical gravity separator
- Hydrocyclone separation system
- Cooling pit
- Balancing, averaging, neutralising pit/tank
- General purpose pit
- Solids settlement pit/silt arrestor
- Baffled settlement pit
- Lint screens
- Plaster arrestor

3.6.4 CATEGORY 3 DISCHARGER (large or industrial waste dischargers)

Category 3 liquid trade waste dischargers are those conducting an activity that;

- are of an industrial nature, and/or
- discharge volumes that exceed 20 kL/d

Note: Any Category 1 or 2 discharger whose volume exceeds 20 kL/day, becomes a Category 3 discharger, except shopping complexes and institutions (eg; hospitals, educational facilities, correctional facilities, etc).

Large trade waste dischargers and other Classification C activities include: abattoir, bakery (wholesale), brewery, cooling towers, cosmetics/perfumes manufacturer, dairy processing (milk, cheese, yoghurt, ice cream etc), food processing (cereals, cannery, condiments, confectionary ,edible oils, fats, essence, flavours, fish, fruit juice, gelatine, honey, meat, pickles, smallgoods, tea & coffee, vinegar, yeast manufacture etc), fruit and vegetable processing, flour milling, glue manufacturer, egg processing, pet food processing, plant nursery (open areas), potato processing, poultry processing, saleyards, seafood processing, soft drink/cordial manufacture, starch manufacture, sugar refinery, tanker washing, tip leachate, transport depot/terminal, water treatment backwash, wholesale meats processing, winery, wine/spirit processing.

Dischargers of industrial waste include the following Classification C activities: acid pickling, adhesive latex manufacture, agricultural & veterinary drugs, anodising, bitumen and tar, bottle washing, cardboard and carton manufacture, carpet manufacture, caustic degreasing, chemicals manufacture and repackaging, contaminated site treatment, cyanide hardening, detergent/soaps manufacture, drum washing, electroplating, engine/gearbox reconditioning, extrusion/moulding (plastic/metal), feather washing, fellmonger, felt manufacture, fertilisers manufacture, fibreglass manufacture, filter cleaning, foundry, galvanising, glass manufacture, ink manufacture, laboratories (excluding those in Category 2), liquid wastewater treatment facility (grease trap receival depot and other pump-out waste depots), metal finishing, metal processing (refining, rumbling, non-cyanide heat treatment, phosphating, photo engraving, printed circuit etching, sheet metal fabrication etc), paper manufacture, pharmaceuticals manufacture, plaster manufacture, powder coating, printing & newspaper, lithographic), sandblasting, slipway, tannery, timber processing (joinery & furniture, plywood, hardwood), textile manufacture (wool dyeing/spinning/scouring), truck washing (internal), waxes and polishes.

3.6.5 CATEGORY S DISCHARGER

Category S liquid trade waste dischargers are those who discharge septic tank waste, pan waste and ship-to-shore pump-out to the sewerage system.

Trade Waste dischargers include the following Classification S activities:

Classification S activities: bus, rail coaches, caravan, motor home, caravan park waste dump points, mooring, marina dump points, pan waste, portable chemical toilets, septage, septic tank effluent, ship-to-shore pump-outs (galley waste and toilet waste).

3.6.6 RECLASSIFICATION OF LIQUID TRADE WASTE DISCHARGERS

An applicant may be given a limited period of time to discharge non-conforming waste while modifying pre-treatment equipment to achieve approval conditions. During this period, the trader is liable for the charges associated with the appropriate higher risk Classification.

3.7 LIQUID TRADE WASTE FEES, CHARGES AND ACTION

Rates, charges and fees are determined by the Independent Pricing and Regulatory Tribunal (IPART) and adopted by WSC in its annual Management Plan. A current schedule of fees and charges is available from WSC.

WSC provides sewerage and liquid trade waste services on a commercial (user pays) basis, subject to IPART pricing determinations.

Subject to IPART pricing determinations, WSC's liquid trade waste fees and charges will include the following:

- Application fee
- Annual trade waste fee
- Re-inspection fee (where applicable)
- Trade waste usage charge (where applicable)
- Excess mass charges (where applicable)
- Non-compliance excess mass charges (where applicable)
- Septic Tank and Pan Waste disposal charges (where applicable)

Details of the above fees and charges are as follows:

3.7.1 Application Fee

The application fee covers the cost of administration and technical services provided in processing an application on a scale related to the classification into which the discharger is classified, and reflects the complexity of processing the application. It includes processing change of ownership of the discharger and renewal of existing approvals.

3.7.2 Annual Trade Waste Fee

The purpose of this fee is to recover the cost incurred by WSC for administration and the scheduled inspections each year to ensure a liquid trade waste discharger's ongoing compliance with the conditions of their approval.

- As part of an inspection, WSC or its agents may undertake monitoring of the liquid trade waste discharges from premises or business. Such monitoring may include but is not limited to flow measurement and the sampling of the liquid trade waste.
- Annual liquid trade waste fees are determined, based on the category of the discharger and are proportionate to the complexity of their inspection and administration requirements. Where the discharger is required to pay for monitoring this will be detailed in the approval and charged based on full cost recovery.
- In view of the adverse impact of wastes with a high concentration of oil and grease on WSC's sewage transportation system, WSC will carry out inspections of commercial premises preparing hot food up to 4 times per annum. The cost of these scheduled inspections is included in the annual trade waste fee for such premises.

3.7.3 Re-inspection Fee

Where non-compliance with the conditions of an approval has been detected and the discharger is required to address these issues, WSC will undertake re-inspections to confirm that remedial action has been satisfactorily implemented. WSC will charge a fee for each re-inspection. A re-inspection may include the analysis of liquid trade waste discharges, the cost of which may be recovered from the discharger.

3.7.4 Trade Waste Usage Charge

This charge is only applicable to Category 2 dischargers. This charge is in addition to the Sewerage Usage Charge.

Trade Waste Usage Charge ($) = $Q \times U$

Where Q = Volume (kL) of liquid trade waste discharged to sewer.

U = Trade Waste Usage Charge ($/kL)

A base Trade Waste Usage Charge will apply to Category 2 dischargers with appropriate pre-treatment equipment that has been properly maintained.

An increased Trade Waste Usage Charge will be applied to Category 2 dischargers where pre-treatment is non-compliant because it has not been provided or the pre-treatment equipment is not properly maintained.

Example 1: (Trade Waste Usage Charge – Compliant pre-treatment equipment).

Q = 300 kL of volume discharged (from the method outlined in section 3.6)

U = $/kg (from Council's Management Plan) in this example $0.31/kL is assumed.

Trade Waste Usage Charge ($) = 300 *x* $0.31

= $93.00

Example 2: (Trade Waste Usage Charge – Non-compliant pre-treatment equipment).

Q = 300 kL of volume discharged (from the method outlined in section 3.6)

U = $/kg (from WSC's Management Plan) in this example $12.90/kL is assumed.

Trade Waste Usage Charge ($) = 300 *x* $12.90

= $3870.00

3.7.5 Chemical Toilet Disposal

Chemical Toilet Disposal Charge $ = Q x S

Where: Q = Volume (kL) of waste discharged to sewer.

S = Charge rate $/kL for chemical toilet waste as indicated in WSC's Management Plan.

3.7.6 Excess Mass Charges

This charge is only applicable to Category 3 discharges.

Excess mass charges will apply for substances discharged in excess of the deemed concentrations in domestic sewage as specified in Table 3. For example, the deemed concentration of Total Oil and Grease is 50 mg/L and the approval is 100 mg/L. If the discharge is 150 mg/L, excess mass charges will apply for the mass calculated between 50-100 mg/L. Non-compliant excess mass charges (see 3.5.9) will apply for the mass above 100 mg/L.

TABLE 3 – Deemed Concentration of Substances in Domestic Sewage*

SUBSTANCE	**DEEMED CONCENTRATION** (mg/L)
Biochemical Oxygen Demand (BOD)	300
Suspended Solids	300
Total Oil and Grease	50
Ammonia (as Nitrogen)	35
pH	7-9
Total Kjeldahl Nitrogen	50
Total Phosphorus	10
Total Dissolved Solids	1000
Sulphate (SO_4)	50*

*SO_4 concentration: the higher of 50 mg/L or the concentration in the potable water supply.

In charging for excess mass the following methodology applies:

EQUATION 1 – is applicable for all substances as specified in Tables 1 & 3 except where qualified by Equations 2 and 3.

Note 1: For those substances specified in Table 1 the excess mass charge is calculated based on the total mass ie; zero mass deemed to be present in domestic sewage

Note 2: For those substances specified in Table 3 the excess mass charge is calculated based on exceedance of the deemed concentration, up to the approval limit.

For example using a deemed concentration for Suspended Solids of 300mg/L, an approval limit of 500mg/L and an analysis result of 700mg/L. The Excess Mass charge is applied for the mass between 300 and 500mg/l and the Non-compliant Excess Mass Charge (see 3.5.9) is applied for the remaining 200mg/L.

EQUATION 2 – is applicable where the BOD exceeds 600 mg/L and is less than or equal to the approval limit. **

** Where the approval is exceeded, a non-compliance excess mass charge applies as detailed in section 3.5.7.

EQUATION 1

$$\text{Liquid Trade Waste Excess Mass Charge (\$)} = \frac{(S - D) \times Q \times U}{1{,}000}$$

Where:

S = Concentration (mg/L) of substance in sample.

D = Deemed concentration (mg/L) of substance considered to be present in domestic sewage.

Q = Volume (kL) of liquid trade waste discharged to the sewerage system (from a method in section 3.6).

U = Unit price ($/kg) for disposal of substance to the sewerage system.

Example 3: (Total Oil and Grease is only considered for this example)

S = 100 mg/L (Oil and Grease) – from analysis of discharge

D = 50 mg/L (from Table 3)

Q = 300 kL of volume discharged (based on a method detailed in section 3.6)

U = $/kg (from Council's Management Plan). In this example $1.13/kg is assumed.

Excess Mass Charge = $\frac{(100 - 50) \times 300 \times \$1.13}{1000}$ = $16.95

EQUATION 2

$$\text{Charges for BOD (\$/kg)} = 2U \; x \; \frac{(S-D)}{600mg/L} \; x \; 1.05^{\frac{(S-600mg/L)}{(600mg/L)}}$$

Where:

S = Concentration (mg/L) of substance in sample.

D = Deemed concentration (mg/L) of substance considered to be present in domestic sewage.

U = Unit price ($/kg) for disposal of substance to the sewerage system.

Example 4: (This equation is only applicable to BOD)

S = 1200 mg/L (BOD) - from analysis of discharge

D = 300 mg/L (from Table 3)

U = $/kg (from WSC's Management Plan). In this example $0.63/kg is assumed.

$$\text{Excess Mass BOD Charging rate} = 2x\$0.63 \; x \; \frac{(1200-300)}{600mg/L} \; x \; 1.05^{\frac{(1200-600mg/L)}{(600mg/L)}}$$

= $1.26 x 1.5 x 1.05

= $1.98/kg

If 300 kL of liquid trade waste is discharged with a concentration of 1200 mg/L of BOD the total applicable charge is as follows:

$$\frac{(1200 \text{ mg/L} - 300 \text{ mg/L}) \times 300\text{kL} \times \$1.98/\text{kg}}{1000}$$

= $534.60

3.7.7 Non-compliance excess mass charge

Where a discharge exceeds the approved concentration limits of substances specified in WSC's approval conditions (or the acceptance criterion listed in WSC's trade waste policy), a non-compliance excess mass charge will apply.

WSC will continue applying the above non-compliance excess mass charge until the quality of discharge complies with WSC's approved quality (or the trade waste policy) limits, within the time frame determined by WSC for remedying the problem. If the discharger fails to rectify the problem within this time frame, the discharger may be required to cease discharging liquid trade waste into WSC's sewerage system and may be subject to legal action for costs associated with the non-complying discharge.

In order to recover WSC's costs for non-compliant excess mass discharges, equations 3, 4 and 5 (as specified below) will apply.

EQUATION 3 – is applicable where the pH of discharged trade waste lies outside the approval range.

EQUATION 4 – is applicable for non-compliant excess mass charges (for substances other than BOD) in excess of their approval limit.

EQUATION 5 – is applicable for non-compliant BOD excess mass charges in excess of the approval limit.

EQUATION 3

Charge for pH ($/kL) = $K \times (S - D)^* \times 2^{(S-D)^*}$

* absolute value to be taken (ie; if the calculation is negative then treat as positive)

Where:

K = pH cost coefficient

S = pH reading in sample

D = pH lower or higher limit of approval as applicable

Example 5: (for pH below 7)

K = pH cost coefficient = (from WSC's Management Plan). In this example $0.35 is assumed.

S = pH 6 reading in sample (from analysis)

D = pH 7 (lower limit of approval Table 1)

= $0.35 x (6-7)* x 2^1

= $0.35 x 1 x 2

= $0.70/kL

If 300 kL of liquid trade waste is discharged with a pH of 6 the total applicable charge is as follows:

300 kL x $0.70/kL

= $210.00

Example 6: (for pH above 9)

K = pH cost coefficient = (from WSC's Management Plan). In this example $0.35 is assumed.

S = pH 11 reading in sample (from analysis)

D = pH 9 (upper limit of approval Table 1)

= $0.35 x (11-9)* x 2^2

= $0.35 x 2 x 4

= $2.80/kL

If 300 kL of liquid trade waste is discharged with a pH of 11 the total applicable charge is as follows:

300 kL x $2.80/kL

= $840.00

EQUATION 4

Non-Compliance Excess Mass Charges ($) = $\frac{(S-A)\,x\,Q\,x\,2U}{1{,}000}+\frac{(S-D)\,x\,Q\,x\,U}{1{,}000}$

Where:

S = Concentration (mg/L) of substance in sample.

A = Maximum concentration (mg/L) of substance as specified in WSC's approval (or liquid trade waste policy).

Q = Volume (kL) of liquid trade waste discharged for the period of non-compliance.

U = Unit prices ($/kg) for disposal of substance to sewerage system.

D = Deemed Concentration (mg/L) of substance deemed to be present in domestic sewage.

Example 7: (Total Oil and Grease is only considered for this example)

S = 600 mg/L of substance in sample (from analysis).

A = 100 mg/L of substance as specified in WSC's approval (or Table 1).

Q = 500 kL of liquid trade waste discharged for the period of non-compliance (from a method in section 3.6).

U = $1.13/kg for disposal of substance to sewerage system (from WSC's Management Plan).

D = 50 mg/L of substance deemed to be present in domestic sewage (from Table 3).

Non-Compliance Excess Mass Charges ($) =

$$\frac{(600-100)\,x\,500\,x\,\$2.26}{1{,}000}+\frac{(600-50)\,x\,500\,x\,\$1.13}{1{,}000}$$

= $875.75

EQUATION 5

BOD non-compliance Excess Mass Charge =

$$2U\ x\ \frac{(A-300mg/L)}{600mg/L}\ x\ 1.05^{\frac{(A-600mg/L)}{600mg/L}}+4U\ x\ \frac{(S-A)}{600mg/L}\ x\ 1.05^{\frac{(S-A)}{600mg/L}}$$

Where:

S = Concentration (mg/L) of substance in sample.

A = Maximum concentration (mg/L) of pollutant as specified in WSC's approval (or liquid trade waste policy).

U = Unit prices ($/kg) for disposal of pollutant to sewerage system.

Example 8: (This equation is only applicable to BOD)

S = 2400 mg/L of substance in sample (from analysis).

A = 600 mg/L of pollutant as specified in WSC's approval (or Table 1).

U = $0.63/kg for disposal of pollutant to sewerage system (from WSC's Management Plan).

.

BOD non-compliance Excess Mass Charging rate =

$$2x\$0.63\ x\ \frac{(600-300mg/L)}{600mg/L}\ x\ 1.05^{\frac{(600-600mg/L)}{600mg/L}} + 4x\$0.63\ x\ \frac{(2400-600)}{600mg/L}\ x\ 1.05^{\frac{(2400-600)}{600mg/L}}$$

$1.26 x 0.5 x 1 + $2.52 x 3 x 1.157625

= $0.63 + $8.75

= $9.38/kg

If 300 kL of liquid trade waste is discharged with a concentration of 2400 mg/L of BOD the total applicable charge is as follows:

$$\frac{(2400\ mg/L - 300\ mg/L) \times 300\ kL \times \$9.38/kg}{1000}$$

= $5909.40

3.7.8 Non-compliance action

WSC may seek compensation for its costs relating to legal action, damage to infrastructure, incurred fines and other matters resulting from illegal, prohibited or unapproved liquid trade waste discharged to the sewerage system. This compensation may be pursued by legal action.

Also included are fines under:

- *Protection of the Environment Operations Act 1997*, section 120(1) Pollution of any waters by a discharger who fails to comply with the conditions of approval for discharge of liquid trade waste to the sewerage system);

- *Local Government Act, 1993*, Section 627 (Failure to comply with an approval) Section 628 (Failure to comply with an order). Non-compliance penalties may be pursued by legal action.

3.7.9 Discharge of stormwater to the sewerage system

The discharge of stormwater, surface and subsoil waters to the sewerage system is prohibited under this policy. As indicated in Section 2.4, the acceptance of first flush stormwater runoff may be permitted. The Non-compliant, trade waste usage charge will be applied (refer to 3.5.4, example 2), if approval is granted to accept the above waters. Excess mass charges will also apply in accordance with Section 3.5.8 and 3.5.9.

3.7.10 Responsibility for payment of fees and charges

Based on Section 560 and 561 of the Local Government Act, 1993 the property owner is liable for payment of fees and charges.

If the property owner deems that the fees and charges are the responsibility of the lessee, then that is a matter between the property owner and the lessee.

TABLE 4 – Summary of Trade Waste Fees and Charges

LIQUID TRADE WASTE DISCHARGE CATEGORY	APPLICATION FEE	ANNUAL NON-RESIDENTIAL SEWERAGE BILL WITH APPROPRIATE	ANNUAL TRADE WASTE FEE	RE-INSPECTION FEE (when required)	TRADE WASTE USAGE CHARGE/kL	NON-COMPLIANT TRADE WASTE USAGE CHARGE/kL	SEPTIC WASTE DISPOSAL CHARGE	EXCESS MASS CHARGES/kg	NON-COMPLIANCE EXCESS MASS CHARGES (if required)
1	Yes	Yes	Yes	Yes	No	Yes*	No	No	No
2	Yes	Yes	Yes	Yes	Yes	Yes*	No	No	No
3	Yes	Yes	Yes	Yes	No	No	No	Yes	Yes
S	Yes	Yes**	Yes	Yes	No	No	Yes	No	No

**** Non-compliant trade waste usage charge, if the discharger fails to install or properly maintain appropriate pre-treatment equipment:***

Category 1 - $1.02/kL (20013/2014)

Category 2 - $13.80/kL (2013/2014)

***** Only applicable if the discharger has a dump point located at their premises which is connected to the sewerage system. All non-residential or business rated private pumping station premises pay these charges.***

Trade Waste fees and charges do not apply to Category 1 business activities outlined in Part 1 exemptions of this policy.

NB. All dischargers of liquid trade waste to WSC's sewerage system should be aware that they are subject to prosecution and imposition of fines under the *Local Government Act 1993*, the *Protection of the Environment (Operations) Act 1997* and its Regulations.

3.8 ASSESSMENT OF DISCHARGE VOLUMES

For the purposes of calculating usage and penalty charges, discharged volumes will be assessed by one of the following methods:

- installation of a flow measuring device on the discharge, or
- estimation based on pumping time where the discharge is pumped to sewer, or

- Estimation based on metered water usage.

Estimations based on metered water usage will be determined by applying appropriate discharge factors. Standard factors established for typical businesses are set out in Table 5 at the end of this section. A discharge factor represents a percentage of the metered water consumption, which is discharged to the sewerage system.

The figures shown in Table 5 are the percentage figures applied to the potable water meter reading to calculate the estimated volume for the type of discharge factor required. These factors will be applied unless considered inappropriate for the type of discharger's operation in which case the discharger may seek a review of the factors by WSC's Rates Section. Any determination will only apply while the nature of the operation remains unchanged.

The two types of discharge factors used are as follows:

3.8.1 Sewer Discharge Factor

The sewer discharge factor includes all discharge to the sewerage system i.e. liquid trade waste and domestic sewerage, and, in some cases, first flush stormwater from open areas. It is the ratio of the estimated volume discharged into the sewerage system to the total water consumption. Additional information is available in Appendix G of the NOW, Liquid Trade Waste Management Guidelines, 2005.

3.8.2 Liquid Trade Waste Discharge Factor

The trade waste discharge-factor is the volume of wastewater that discharges from the trade waste processes. It is the ratio of the estimated volume of liquid trade waste discharged into the sewerage system to the total water consumption.

TABLE 5 – SEWER AND TRADE WASTE DISCHARGE FACTORS

Discharger's Premises / Facility	Discharge Factor %	
	Sewer	Trade Waste
Bakery	95	25
With a residence attached[1]	70	18
Bed and Breakfast / Guesthouse (max. 10 persons)	75	N/A[2]
Boarding House	90	20
Butcher	95	90
With a residence attached[1]	70	65
Cakes, Patisserie, Hot Bread	95	50
Car Detailing	95	90
Car Wash – small hand wash only	75	70[5]
Car/Vehicle Wash – Robo, Carlovers, Gerni type and auto etc	95	90[5]
Caravan Park – with commercial kitchen	75	25
Caravan Park – no commercial kitchen	57	N/A[2]
Chicken / poultry shop (retail fresh, no cooking)	95	90
Chicken cooking (Charcoal Chicken)	95	80

TABLE 5 – SEWER AND TRADE WASTE DISCHARGE FACTORS		
Discharger's Premises / Facility	**Discharge Factor %**	
	Sewer	**Trade Waste**
Club – Direct service to club Club – Bowling, Jockey, Racing, Golf	95 50	30 45
Coal Mine	25	25
Cold Store	7	N/A[2]
Community hall (minimal food only)	95	N/A[2]
Concrete Batching Plant (process water to stormwater)	2	1
Correctional Centre (with laundry)	90	15[5]
Craft / Stonemason	95	80
Day Care Centre	95	N/A[2]
Delicatessen, mixed business (no hot food) With a residence attached[1]	95 70	N/A[2] N/A[2]
Delicatessen, mixed business (with hot food) With a residence attached[1]	95 70	50 50
Dental Surgery with X-ray With a residence attached[1]	95 70	80 60
Fast Food (McDonalds, Burger King, Pizza Hut)	95	62
Fast food (KFC, Red Rooster)	95	80
Fresh Fish Outlet	95	90
Hairdresser	95	N/A[2]
High School	95	25[5]
Hospital (public and private)	95	60
Hostel	90	20
Hotel	100	25
Joinery	95	10
Laundry	95	92[5]
Marina	90	70
Mechanical Workshop / Garage / lawn mower repairer / equipment hire etc[3]	95	70
Mechanical Workshop with car yard / car wash	85	70
Medical Centre	95	25[5]
Motel – small less than 15-25 rooms (no hot food)	90	N/A[2]
Motel with hot food	90	20
Nursery	25	5
Nursing Home	85	50
Office Building	95	N/A
Optical Service	95	N/A[2]
Panel Beater / Spray Painter	95	70
Primary School	95	10[5]
Photo-Processing	85	85
Printer	95	85

TABLE 5 – SEWER AND TRADE WASTE DISCHARGE FACTORS		
Discharger's Premises / Facility	**Discharge Factor %**	
	Sewer	**Trade Waste**
Radiator Repair	90	85
Restaurant[4]	95	50
Self Storage	90	N/A
Seafood – Co-ops and Fresh	95	90
Service Station	90	70
Service Station (with car washing)	95	85
Shopping Centre	85	50
Supermarket	95	70
Sporting Ovals - Amenities Blocks	25	20
Swimming Pool (commercial)	85	N/A[2]
Take Away Food	95	50
Technical College or University	95	Note 6
Veterinary Surgeon (no X-ray), Kennels, Animal wash	80	N/A[2]
Wreckers	85	85

[1] If a residence is attached that has garden watering, the residential SDF is applied.

[2] A trade waste usage charge is not applicable for this activity.

[3] Includes lawn mower repairs.

[4] Includes Café, Canteen, Bistro, etc.

[5] A trade waste usage charge applies, if appropriate pre-treatment equipment has not been installed or has not been properly operated or maintained.

[6] A discharge factor to be applied on the basis of the relevant activity, eg takeaway food, mechanical workshop, optical services, etc.

Table 2 – Typical Household Water Usage

Activity	Water Usage
Automatic washing machine	73 – 250 L/load
Car washing with a hose	100 – 300 L
Dishwasher	20 – 60 L/wash
Hand basin	5 L/day
Shower	40 – 250 L

Toilet*	3 or 6 L/flush

* Old model toilets (pre 1990) may be up to 12 L/flush.

3.9 MONITORING

WSC will carry out inspections of the premises of all liquid trade waste dischargers and their treatment facilities at least once per annum. Inspections of commercial premises preparing hot food may be performed up to 4 times per annum. Monitoring of large and industrial dischargers is to be performed as specified in the approval conditions.

The Applicant may be required to monitor the liquid trade waste discharge as a condition of an approval or agreement. They may also be required to pay for any sampling and testing of liquid trade waste undertaken by WSC.

For this purpose, an inspection/sampling point, where the waste can be inspected and sampled, will be specified in the approval and/or agreement. This point will normally be located just after the discharge leaves the pre-treatment facility. The discharger may need to install a suitable method of flow measurement.

WSC may, as specified in the Approval Letter, require the discharger to:

- install a permanent primary measurement device;
- measure the volume and flow rate using the permanently installed flow measurement system (such as a flow metering system); or
- install a flow measurement device on a temporary basis and obtain enough data to determine a basis for assessing the flow rate and volume; and
- provide a system that allows obtaining a flow weighted composite sample.

Testing of samples is to be undertaken by a NATA-registered or other laboratory recognised by WSC to ensure reliable and accurate results. Where the discharger is sampling the effluent, WSC may randomly take duplicates to confirm the waste characteristics.

3.10 LIQUID TRADE WASTE AGREEMENT

In addition to its approval under the Local Government Act, WSC may require certain dischargers, including those who wish to discharge liquid trade waste in large volumes (discharge >20 kL/d) or industrial waste (Concurrence Classification C type discharges) or Classification S into its sewerage system to enter into a liquid trade waste agreement with WSC. The agreement will set out the conditions associated with the discharge and execution of the agreement will be a condition of the approval issued by WSC (refer to section 3.3). The conditions will be binding on the applicant and WSC. The agreement will be for a period of up to five years. No discharge is to be made to WSC's sewerage system until the agreement or an interim agreement has been executed.

Provision can be made in the agreement for (in addition to WSC's approval conditions):

- additional conditions for discharge of liquid trade waste
- fees and charges

- cancellation of the agreement and/or order to cease the discharge if the discharger is found to be in breach of the agreement or the liquid trade waste approval or, in the opinion of WSC, the waste is adversely affecting the sewerage system or the environment
- entry by WSC officers to inspect the liquid trade waste collection, treatment, monitoring and disposal systems
- the applicant to notify WSC in advance of any changes that may affect the quality and quantity of the liquid trade waste
- the amount of bond/security to be lodged with WSC prior to discharging to the sewerage system

3.11 ENFORCEMENT OF APPROVALS AND AGREEMENTS

Any person who fails to obtain WSC's approval to discharge liquid trade waste into the sewerage system, or fails to comply with the conditions of the approval, may be liable to a penalty as provided under the *Local Government Act* (sections 626, 628 and 634 to 639).

Discharging of liquid trade waste without obtaining WSC's approval or failing to comply with the conditions of the approval is an offence under section 120 (1) of the *Protection of the Environment Operations Act 1997* and the Protection of the Environment Operations (General) Regulation 1998. Additionally, under section 222 of the *Protection of the Environment Operations Act 1997*, WSC may issue a penalty notice (that is an on-the-spot fine) to such a discharger.

Any person who fails to comply with the terms or conditions of a liquid trade waste agreement (i.e. there is a breach of the agreement) will be required to indemnify the WSC against any resulting claims, losses or expenses in accordance with the agreement. Suspensions may also apply and may include a notice to cease the discharge.

3.12 MODIFICATION AND REVOCATION OF APPROVALS

WSC reserves the right to modify or revoke an approval to discharge liquid trade waste to the sewerage system in any of the following circumstances:

- if the approval was obtained by fraud, misrepresentation or concealment of facts
- for any cause arising after the granting of the approval which, had it arisen before the approval was granted, would have caused the council not to have granted the approval
- failure to comply with a requirement made by or under the *Local Government Act 1993* relating to a condition of the approval
- failure to comply with a condition of the approval

3.13 PREVENTION OF WASTE OF WATER

Water must be used efficiently and must be recycled where practicable. It is an offence, under section 637 of the *Local Government Act 1993* and its Regulations, to waste or misuse water.

The owner, occupier or manager of premises to which water is supplied by the WSC is required to prevent waste of water by taking prompt action to repair leaking taps, pipes or fittings located on the premises, and take any other action that is reasonable to prevent waste and misuse of water.

Dilution of liquid trade waste with water from any non-process source including WSC's water supply, bore water, groundwater and/or stormwater as a means of reducing pollutant concentration is prohibited.

3.14 EFFLUENT IMPROVEMENT PROGRAMS

Where there is an existing discharge and the liquid trade waste quality does not meet WSC's discharge requirements, the applicant will be required to submit an 'effluent improvement program' setting out how WSC's requirements will be met. The proposed plan must detail the methods/actions proposed to achieve the discharge limits and a timetable for implementation of the proposed actions. Such actions may include more intensive monitoring, or improvements to work practices and/or pre-treatment facilities to improve the effluent quality and reliability.

3.15 DUE DILIGENCE PROGRAMS AND CONTINGENCY PLANS

For **Classification A discharges**, a discharger is not required to submit either a due diligence program or a contingency plan.

For **Classification B and Classification S discharges,** a discharger may be required to submit a due diligence program and a contingency plan where WSC considers that the discharge may pose a potential threat to the sewerage system and/or the environment.

For **Classification C discharges,** a discharger may need to provide a due diligence program and contingency plan to WSC within six months and three months respectively of receiving a liquid trade waste approval.

It should be noted that:

- If the discharger has an accredited Environmental Management System (EMS) in place, a due diligence program and contingency plan may not be required. However, proof of accreditation must be provided to WSC with the application. The EMS may not include all necessary provisions in regard to trade waste. In such cases, WSC may require that a suitable due diligence program and contingency plan be developed and submitted to WSC.
- Where WSC considers there is potential risk to the sewerage system and/or the environment from a discharge, it may request a due diligence program and contingency plan be submitted prior to commencing the discharge.

PART 4 – MANAGEMENT OF SEPTIC TANKS AND PRIVATE PUMPING STATIONS

This section deals with WSC's Management of Septic Tanks and for the connection of private pumping stations to WSC's sewerage system. The management of septic tanks and private pumping stations does not form part of or relate to Parts 1-3 of this policy.

4.1 SEPTIC TANKS

Septic Tanks are normally installed in premises not serviced by WSC's reticulated sewerage system.

The effluent from the septic requires pumping-out on a routine basis. WSC provides a service for these tanks to be routinely pumped-out and the charges for this service are contained in the WSC rates (see 4.3.1 below).

The sludge (Septage) from the septic tanks requires pumping out, when the level in the sludge chamber reaches two thirds of the tanks capacity. It is the responsibility of the property owner to ensure that the sludge from the sludge tank does not overflow into the effluent tank.

If the sludge tank requires pumping-out, the property owner should contact WSC's current approved contractor, to arrange for the sludge to be pumped-out. Payment for fees and charges is the responsibility of the property owner (see 4.3.2 below). The schedule of fees and charges is contained in WSC's Management Plan.

The discharge of septic effluent must comply with the Acceptance Limits in Relation to Sulphide Generation.

As per the resolution from Council's Ordinary Meeting held on 22 May 2013 the following applies in regards to septic tanks and Council's current effluent collection service.

> ***"Council is to cease direct provision of charge based effluent and sludge removal and disposal services by a Contractor to Council as at 31 December 2013."***

4.2 PRIVATE PUMPING STATIONS

Private Pumping Stations are installed by property owners, in properties where WSC's reticulated sewerage system does not service the property and/or the sewage from the property cannot gravity flow to WSC's sewerage system.

An application to install a private pumping station is required under section 68, Part C6 of the Local Government Act, 1993.

WSC's approval of the installation will provide conditions but not limited to the following:

- odour control, to minimise septicity of the discharge
- maximum volume discharged
- construction details

Please see 4.4 below for the acceptance limits for the discharge of septic waste.

WSC will routinely inspect the private pumping station for compliance with the approval as follows:

1 the instantaneous flow rate to the sewerage system (Litres/second)

2 compliance with the acceptance limits in relation to sulphide generation

3 the condition of the installation

4.4 ACCEPTANCE LIMITS IN RELATION TO SULPHIDE GENERATION

. The Total Sulphide is to be less than 0.2 ppm.

. The Dissolved Sulphide is to be less than 0.01 ppm.

. The Hydrogen Sulphide is to be less than 0.05 ppm.

. The Dissolved Oxygen is to be greater than zero ppm.

. The Redox Potential is to be greater than minus 80.

Note: The above limits will generally not be met if the sewage detention time, in the pumping station and rising main, is greater than 2 to 4 hours unless the sewage is conditioned by the addition of oxygen or other agent.